

Practice Note 6A.9A — Additional Margins

Issue Date	Cross Reference	Enquiries
Added on 21 January 2013 and amended on 8 August 2016	Rule 6A.9A	Please contact Clearing Risk Management: rm-securities@sgx.com Facsimile No-: 6532 0297 E-Mail Address:-

4.1 Introduction

[4.1.1.1](#) Rule 6A.9A.1 states that in relation to Novated Contracts, CDP may call for additional margins from one or more Clearing Members in the following situations:

- (1) when, in CDP's opinion, unstable conditions exist or market conditions or price fluctuations relating to one or more securities or Futures Contracts at any time require additional margins to maintain an orderly market or to preserve financial integrity or for any other reason;
- (2) when CDP believes that any Clearing Member is carrying exposure that:
 - (a) is larger than is justified by the financial condition of that Clearing Member; or
 - (b) places or may place CDP at risk;
- (3) where the Clearing Member is found to have a record of frequent rule violations or inadequate or unsound management or serious operational defects which, in CDP's opinion, places or may place CDP at risk; or
- (4) where market conditions or price fluctuations are such that CDP deems it necessary, to call upon the Clearing Members whom it believes are affected by such conditions or fluctuations to deposit additional funds.

[4.2.1.2](#) The objective of additional margin requirements is to provide greater assurance that specific risks which may potentially not be captured under CDP's margin setting methodologies are appropriately accounted for and collateralised for a safer and more robust clearing system.

[4.3.1.3](#) CDP conducts daily stress testing of Clearing Members' positions under a comprehensive range of stressed scenarios, to monitor Clearing Members' ~~s~~ exposures and to ascertain the adequacy [of the](#) CDP Clearing fund. In addition, as part of its continuing risk management process, CDP monitors news and developments which may affect ~~a~~ Clearing Members, and conducts risk-based inspections on Clearing Members' ~~s~~ risk and credit management practices.

[4.4.1.4](#) In the event that any of the circumstances specified in paragraph [4.1.1](#) ("Specified Circumstances") exist, CDP may impose additional margin requirements. Such additional margin requirements will typically be one of the following:

- (1) Concentration risk add-on;
- [\(2\) Default Fund risk add-on;](#)
- ~~(23) Specific Security~~[Credit risk](#) add-on; or
- ~~(34) Credit Risk~~[Specific Security risk](#) add-on.

~~4.5.1.5~~ This Practice Note provides guidance on the additional margin requirements set out in paragraph ~~41.4~~.

[5.2](#) Concentration risk add-on

~~5.1.2.1~~ ~~Where one of the Specified Circumstances exist,~~ CDP may impose a concentration risk add-on if:
(a) the Clearing Member's portfolio is concentrated in a security; ~~or~~
(b) ~~the Clearing Member's outstanding trades result in large potential stress test exposures, net of its margin, under CDP's stress testing regime.~~

~~5.2. Where a Clearing Member's portfolio is concentrated in a security~~

~~5.2.1.~~ [2.1.1](#) For guidance, a Clearing Member portfolio is deemed to be concentrated in a security if its net Mark-to-Market (MTM) buy or sell value in that security is more than 10% of its Aggregate (across all securities) net MTM buy or sell value respectively.

~~5.2.2.~~ [2.1.2](#) The concentration ~~margin~~[risk](#) add-on ~~is imposed as a percentage add-on to a for a portfolio may range between 10% and 30% of the~~ Clearing Member's ~~M~~[maintenance M](#)margin requirements. ~~The add-on would typically be up to 50%, but if the concentrated security is a FSSTI constituent. A higher add-on of 25% to 50% applies for all other securities. D~~[Deviations from this range](#) may occur depending on factors such as the risk profile of the security, the concentration level of the portfolio in that security, and the side (buy or sell) that is used to compute the portfolio maintenance margin.

~~5.2.3.~~ [2.1.3 A](#) Clearing Member will be notified if concentration margin add-on is to be imposed. The concentration add-on will be effective until such time that trades are settled and CDP considers that there is no longer any undue concentration risk in the Clearing Member's portfolio. CDP may impose the add-on as early as the next clearing cycle after the Clearing Member is notified.

[3](#) Default Fund risk add-on

[3.1](#) CDP may impose a default fund risk add-on for Clearing Members with significant potential tail risk exposure under CDP's stress testing regime.

~~5.3. Where the Clearing Member's outstanding trades result in large potential stress test exposures, net of its margin, under CDP's stress testing regime~~

[3.2](#) CDP conducts stress testing of Clearing Members' outstanding positions in line with CPMI~~SS~~[IOSCO](#)¹

¹ Principles for Financial Market Infrastructures issued by the Committee on Payments and Market Infrastructure (CPMI) and the Technical Committee of the International Organization of Securities Commissions (IOSCO)

and other global best practice standards to assess Clearing Fund adequacy. CDP applies a comprehensive range of stressed scenarios and provides sufficient resources to cover the simultaneous default of the Clearing Member and its affiliated Clearing Members with the largest aggregate loss ("[Top 1](#)"), and two other financially weakest Clearing Members ("[Weak 1](#)", "[Weak 2](#)"). CDP also simulates its obligation to settle outstanding cash trades with the direct customers of the Clearing Member should the Clearing Member default ("re-novation"). Stress testing is performed at every end of day, as well as intraday.

[3.2.1](#) While stress testing focuses on the mutualized resources to cover a default of the [Top 1](#), [Weak 1](#) and [Weak 2](#), CDP would also want to secure appropriate amount of resources from an individual Clearing Member with significant potential tail risk exposure. This provides a balance between mutualization and the defaulter pay principle.~~5.3.1. CDP may impose concentration risk add-ons on a Clearing Member if the Clearing Member's outstanding positions are so large as to undermine the adequacy of the Clearing Fund. CDP takes into consideration the size of the Clearing Member's potential stress test exposure, net of margins, relative to the Clearing Fund and the credit standing of the Clearing Member.~~

~~5.3.2.~~[3.2.2](#) CDP may require this additional margin to be deposited with CDP [not later than](#) the day [after](#) the trades are executed or reported to SGX-ST.

~~5.3.3.~~[3.2.3](#) To provide Clearing Members with more time to prepare any necessary funding arrangements to meet the higher margin requirements, Clearing Members are encouraged to engage CDP early on potential additional margin requirements if they expect significant traded values or large direct business transactions that may result in unusually large potential stress test exposures.

~~5.3.4.~~[3.2.4](#) For early engagement with CDP, Clearing Members should notify CDP when their aggregated 3-day gross buy value or gross sell value, whichever is higher, is expected to exceed S\$500 mil [or any figure that may be communicated by CDP](#). ~~For specific Clearing Members, this guiding threshold may be adjusted to reflect credit standing, portfolio composition and other relevant stress testing outcomes.~~

~~5.3.5. CDP will consider whether a concentration risk add-on needs to be imposed based on the factors set out in paragraph 5.3.1. The concentration risk add-on may be sized to cover the potential stress test exposure, net of margins, that is in excess of the level deemed acceptable for maintaining Clearing Fund adequacy.~~

[3.2.5](#) For guidance, the potential tail risk exposure is the worst loss estimated from different stressed scenarios, net of margins and any add-ons. The potential tail risk exposure is considered to be significant if:

- (a) [the potential tail risk exposure of any Clearing Member and its affiliated Clearing Members \("Member Group"\) exceeds a percentage \(a threshold as determined by SGX\) of CDP Clearing Fund resources \("Threshold 1"\); or](#)

- (b) the aggregate potential tail risk exposure of any Member Group, together with Weak 1 and Weak 2, exceeds a percentage (a threshold as determined by SGX) of CDP Clearing Fund resources ("Threshold 2"). Threshold 2 will be higher than Threshold 1².

3.2.6 CDP will determine the quantum of the default fund risk add-on based on the potential tail risk exposure from each Clearing Member relative to each of the two thresholds, as described below:

- In respect of Threshold 1, the applicable add-on for a Member Group is equal to the difference between its potential tail risk exposure and Threshold 1;
- In respect of Threshold 2, the total applicable add-on is equal to the difference between (i) the potential tail risk exposure aggregated across the Member Group, Weak 1 and Weak 2, (provided the Member Group does not include Weak 1 or Weak 2) after offsetting any add-on arising from Threshold 1, and (ii) Threshold 2. The applicable add-on is then allocated to the Member Group, Weak 1 and Weak 2 proportional to their exposure; and
- The add-on for a Clearing Member is equal to the sum of its applicable add-on arising from Threshold 1 and/or Threshold 2. CDP may at its sole discretion not impose on Weak 1 or Weak 2 the add-on if it is not significant.

3.2.7 An illustration of the calculation is provided at the end of this Practice Note.

4. Credit risk add-on

4.1 CDP may impose a credit risk add-on if there are concerns regarding the liquidity, solvency or credit-worthiness of a Clearing Member. Indicators of potential heightened credit risk posed by a Clearing Member includes, without limitation:

- deterioration in the credit standing of the Clearing Member as assessed through SGX's internal credit risk rating model, downgrading of the credit rating or credit outlook of the member or its parent/affiliates by external credit agencies, widening credit default swaps of the member or its parent/affiliates;
- adverse market sentiments/news on the Clearing Member or its parent/affiliate or when CDP believes the Clearing Member or its parent/affiliate may be adversely affected by unstable market conditions or price fluctuations which CDP deems a concern;
- reduction of the Clearing Member's financial resources;
- in CDP's view, there is an increase in the Clearing Member's risk exposure, for example, increased operational risk due to unsound risk or credit practices or exceptional large non-SGX exposures, that potentially places CDP at greater risk; and
- other specific issues or concerns relating to the Clearing Member, which may arise from SGX's on-site inspection, the Authority's audit findings; or frequent rule violations committed by the Clearing Members.

² Threshold 1 and 2 is currently defined as 70% and 90% respectively, but may be revised from time to time.

4.2 For guidance, the quantum of the credit risk add-on for Clearing Members will be determined by considering the following:

- (a) for a Clearing Member with credit standing CDP deems equivalent to B rating and below (based on the indicators described in paragraph 4.1 of this Practice Note), the quantum is equal to the difference between the member's potential tail risk exposure and a threshold. This threshold³ will be determined by SGX, as a percentage of actual CDP Clearing Fund resources and will be lower than the Threshold 1 described in paragraph 3.2.5 of this Practice Note; and
- (b) the Clearing Member's available financial resources, prevailing market conditions, the size of Clearing Member's positions.

6.5 Specific security add-on

~~6.1.5.1~~ 6.2.5.1 CDP may impose a specific security add-on if there are concerns that trading in the security may be unfair or disorderly. This includes, without limitation:

- (a) where there is ~~adverse~~ news that may have a significant impact on its market price (e.g. irregular practices in the listed company); or
- (b) where the security is declared a designated security in accordance with SGX-ST Rule 8.8.

~~6.2.5.2~~ 6.2.5.2 In determining whether a specific security add-on is warranted, CDP will take into account all relevant factors, including the following:

- (a) trading value of the security relative to total traded value; and
- (b) observable or expected price volatility of the security.

~~6.3.5.3~~ 6.3.5.3 The Margin Circular issued by CDP will indicate the list of securities that will be margined at different rates. In respect of changes arising from an ad-hoc review arising from exceptional events, CDP will give Clearing Members at least a 1-day notice period before applying the specific security margin.

ILLUSTRATION ON THE CALCULATION OF THE DEFAULT FUND RISK ADD-ON

Assumptions:

- (i) Actual Clearing Fund resource is \$100.
- (ii) Assume SGX assigns percentages of 70% and 90% to Threshold 1 and Threshold 2 respectively.

Threshold 1: 70% x 100 = 70 (Any Member Group)

Threshold 2: 90% x 100 = 90 (Any Member Group + Weak 1 + Weak 2)

³ The threshold is currently defined as 15%, but may be revised from time to time.

Example 1 — Add-on applies to a Member Group X only

Assume only one stress testing scenario generates exposure that exceed the thresholds,

- Exposure (X + Weak 1 + Weak 2) = 85
- Exposure (X) = 80
- Exposure (Weak 1) = 5
- Exposure (Weak 2) = 0

	Loss	Loss exceeds threshold		Potential add-on	
		Threshold 1	Threshold 2	Threshold 1	Threshold 2
X + Weak 1 + Weak 2	85		No		
X	80	Yes		80-70=10	
Weak 1	5	No			
Weak 2	0	No			

- Therefore, credit risk add-on of 10 applies to Member Group X only.

Example 2 — Add-on applies to a Member X, and Weak 1 and Weak 2 by apportionment

Assume only one stress testing scenario generates exposure that exceed the thresholds,

- Exposure (X + Weak 1 + Weak 2) = 95
- Exposure (X) = 65
- Exposure (Weak 1) = 15
- Exposure (Weak 2) = 15

	Loss	Loss exceeds threshold		Potential add-on	
		Threshold 1	Threshold 2	Threshold 1	Threshold 2
X + Weak 1 + Weak 2	95		Yes		95-90=5
X	65	No			
Weak 1	15	No			
Weak 2	15	No			

- Therefore, credit risk add-on of 5 applies to (Member Group X + Weak 1 + Weak 2). The add-on for each of the three members will be proportionate to their share of the aggregate exposure.
 - For X, add-on = $65/(65+15+15)*5 = 3.5$
 - For Weak 1, add-on = $15/(65+15+15)*5 = 0.8$
 - For Weak 2, add-on = $15/(65+15+15)*5 = 0.8$

7-Credit risk add-on

7.1. CDP may impose a credit risk add-on if there are concerns regarding the liquidity, solvency or credit-worthiness of a Clearing Member. Indicators of potential heightened credit risk posed by a Clearing Member includes, without limitation:

- (a) downgrading of the credit rating or credit outlook of the Clearing Member or its parent/affiliates;

- (b) widening credit default swaps of the Clearing Member or its parent/affiliates;
- (c) adverse market sentiments/news on the Clearing Member or its parent/affiliate or where CDP believes the Clearing Member or its parent/affiliate may be adversely affected by unstable market conditions or price fluctuations which CDP deems a concern;
- (d) reduction of Clearing Member's financial resources;
- (e) in CDP's view, there is an increase in the Clearing Member's risk exposure, for example, increased operational risk due to unsound risk or credit practices or exceptional large non-SGX exposures, that potentially places CDP at greater risk; and
- (f) other specific issues or concerns relating to the Clearing Member, which may arise from SGX's on-site inspection, the Authority's audit findings; or frequent rule violations committed by the Clearing Members

7.2. In determining the quantum of the credit add-on, CDP may consider the following:

- (a) prevailing market conditions;
- (b) the Clearing Member's available financial resources, including liquidity resources; and
- (c) the size of Clearing Member's positions.

7.3. The credit risk add-on may be imposed as an absolute dollar amount, or as a percentage add-on to a Clearing Member's maintenance margin requirements.